

WATER CONSERVATION NEWS

Building sustainability, reliability, and accountability through efficient water use

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Where Has CALFED Gone?

By Tom Gohring, California Bay-Delta Authority

The simple answer is “we’re still here.” For the longer answer, read on.

The past 12 months have seen a lot of changes in the way CALFED is organized. However, CALFED’s goals of transparency, accountability and performance toward program objectives have not changed.

I was reminded recently of a water user’s meeting that I attended in the fall of 1999. At that time, I was leading a team that was designing the CALFED Water Use Efficiency (WUE) Program and was somewhat surprised to hear a water manager announce that “CALFED is dead.” Nine months later, I watched Interior Secretary Bruce Babbitt and Governor Gray Davis congratulate each other on the Capitol steps for the recently-released CALFED Framework for Action. Two months after that, the Record of Decision (ROD) was signed by 23 state and federal agencies and CALFED officially entered its implementation phase.

This story illustrates CALFED’s tumultuous history – and its tenacity.

A year ago, agency staff and stakeholders began the rigorous re-evaluation of CALFED that was called for in Governor Arnold Schwarzenegger’s May 2005 budget revision. The governor’s orders were to refocus the program on resolving serious problems in the Delta and figure out

how to get the job done more effectively. After many public meetings, a review by the Little Hoover Commission, fiscal review by the Department of Finance, and business process review by a consultant, Secretary for Resources Mike Chrisman released a 10-Year Action Plan to accomplish the governor’s request. The Plan

reaffirms the state’s commitment to CALFED and lays out some notable changes (the plan can be found at http://calwater.ca.gov/Revitalizing_CALFED/10YearActionPlanLink.shtml).

Some of these changes, such as creating a new governance structure and moving some Bay-Delta Authority staff to the Resources Agency, require legislative action.

(As this article goes to press, a Senate/Assembly Budget Conference Work Group is working out the details of moving Bay-Delta Authority staff to other state agencies.) Other changes, like the delineation of “Direct” and “Coordinated” CALFED Actions, are already under way. The table, CALFED Program Activities Defined as Direct and Coordinated CALFED Actions, lists which actions fall into each category.

Under this new structure, major decisions made about Direct CALFED Actions (such as Ecosystem Restoration, Delta Conveyance and Surface Storage) will continue to be made by the Bay-Delta Public Advisory Committee (BDPAC) and the CALFED Bay-Delta Authority



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***CALFED**, continued from Page 1*

(CBDA) Board. The CALFED Coordinated Actions (such as Water Use Efficiency and Watersheds) will still be carried out consistent with the CALFED ROD, but will have less frequent contact with BDPAC and the CBDA Board.

The intent of this new structure is to more clearly focus CALFED on resolving issues that directly impact the Delta, and to ensure that issues broader than the CALFED solution area have appropriate statewide forums. Under this new structure, the Department of Water Resources (DWR), the State Water Board and Bureau of Reclamation will continue to implement the WUE Program – and will continue to work toward meeting WUE ROD commitments. CALFED advisory and governing boards will only review overall progress toward ROD commitments, rather than step-by-step implementation. This change also allows DWR to continue the migration of water conservation into its Integrated Regional Water Management activities.

DWR managers have voiced their resolve to implement WUE commitments in the ROD, including the high level of public involvement, adherence to beneficiaries pay principles and commitment to good science that you have come to expect. Just to jog your memory, some of the unfinished WUE ROD commitments include:

- Providing incentives for water recycling and agriculture and urban water conservation Continuing close work with the AWMC and CUWCC

- Maintaining a WUE Public Advisory Committee
- Implementing a process for certification of water suppliers' compliance with the terms of the urban MOU
- Completing the Year 4 WUE Comprehensive Evaluation (please note: a public draft of this document can be found at www.calwater.ca.gov/Programs/WaterUseEfficiency/WaterUseEfficiencyEvalReviewDraft.shtml)
- Implementing the CALFED appropriate water measurement actions by enacting the administrative actions and working with the Legislature to enact the legislative components (the appropriate measurement actions can be found at www.calwater.ca.gov/Programs/WaterUseEfficiency/WaterUseEfficiencyEvalReview-Draft.shtml)

So stay tuned. If your interest lies with CALFED program elements like Ecosystem Restoration, Conveyance and the EWA, upcoming CALFED public meetings should be extremely engaging. If you're interested in step-by-step implementation of WUE, be sure to engage DWR staff at their upcoming stakeholder meetings. I'm sure you'll join me in wishing the folks at DWR, Reclamation and the Water Board luck as they continue to wrestle with these important issues.

Office of Water Use Efficiency ***Mission Statement***

In cooperation with others, we promote the efficient and beneficial use of California's water resources to sustain our human and natural environment.

Proposition 50 Desalination Grants

Second Cycle Anticipated to Disburse Another \$21.5 Million on New Water Desalination Projects

By Fawzi Karajeh

In November 2002, California voters passed Proposition 50, the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002.

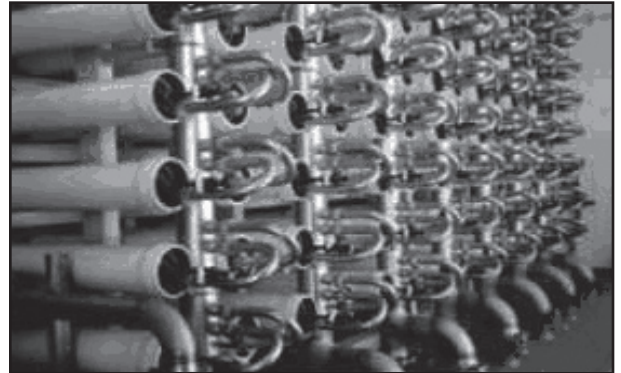
Chapter 6 of Proposition 50, titled Contaminant and Salt Removal Technologies, allocates \$100 million for seawater and brackish water desalination project grants and for projects that treat or remove contaminants such as MTBE, NDMA, Perchlorate, and other emerging contaminants.

The California Department of Health Services is administering \$50 million in grants under Sections 6(b) and 6(c) for treating and removing contaminants and disinfection technologies.

The California Department of Water Resources (DWR) is administering the other \$50 million desalination program for seawater and brackish water desalination

projects under Chapter 6(a). The program provides grants for construction, research and development, pilot and demonstration projects, and feasibility studies. It will help local agencies develop new local potable water supplies through the construction of brackish water and oceanwater desalination projects. It also will advance water desalination technology and its use with feasibility studies, research and development, and pilot and demonstration projects.

The Office of Water Use Efficiency and Transfers of DWR received 49 proposals for its 2005-06 second cycle of Proposition 50 Chapter 6(a) desalination grants by its March 2006 deadline.



The draft 2006 desalination Proposal Solicitation Package (PSP) was released for public comments in October 2005. Two public workshops about the draft PSP and to describe the application and review processes were held in Sacramento and in San Diego. The final PSP was released in January and an informational public workshop was held in Sacramento in February.

See DESAL on Page 4

UC Davis Energy Efficiency Center Established

By Peter Brostrom

UC Davis was awarded a \$1 million grant from the California Clean Energy Fund (CALCEF) to establish an Energy Efficiency Center. The center, launched on April 12, 2006, by Gov. Arnold Schwarzenegger, CALCEF and UC Davis officials, will work to develop collaborations between academia, industry and the investment community to find ways to bring innovative technologies to the market quickly.

Pacific Gas and Electric has also pledged \$500,000 over five years to support fel-

lowships, scholarships and a major energy efficiency conference.

UC Davis was selected to host the center partly because of its long history of excellence in agricultural research. A key area of agricultural energy research will be the connection between water use and energy use. Agricultural irrigation requires energy to transport, pump and apply water. UC Davis agricultural engineers will look at technologies that improve agricultural water use efficiency, while reducing water and energy use. The Energy Efficiency

Center will have 32 faculty members from 11 different academic departments.

The Office of Water Use Efficiency and Transfers has funded the energy and water use research of several UC Davis scientists. DWR's support of water and energy use efficiency will continue. Last year, Dr. Shrinivasa Upadhyaya, an agricultural engineer with the center, was awarded a Proposition 50 Water Use Efficiency Research Grant to study improvements in surface irrigation of alfalfa.

Urban Water Management Plans for 2005 Under Review

By Dave Todd

Department of Water Resources (DWR) helps urban water suppliers prepare water management plans and understand requirements of the Urban Water Management Planning Act.

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Sections 10610 - 10656). The act requires every urban water supplier that provides water to 3,000 or more customers, or provides more than 3,000 acre-feet of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The act describes Urban Water Management Plans and how urban water suppliers should adopt and implement the plans. In enacting this part, the Legislature intended to permit levels

of water management planning appropriate with the number of customers served and the volume of water supplied.

DWR staff reviews all of the urban water management plans submitted to it as the act requires. They provide results of their reviews to local and regional water suppliers. The results also are put into a Legislative Report for the California Legislature a year after plans are due to DWR. The report to the Legislature for the 2005 plan is due December 31, 2006.

The Office of Water Use Efficiency and Transfers staff has received 271 Urban Water Management Plans (UWMP) as of May 1, 2006. There were 473 urban water suppliers that were required to adopt a UWMP no later than December 31, 2005.

The Urban Water Management Planning Worksheets and Demand Management



Measure Worksheets were updated for the 2005 UWMP and are posted at the Technical Assistance section under UWMP Review Sheets (www.owue.water.ca.gov/docs/reviewsheets.xls). The Guidebook, Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan, is available at: www.owue.water.ca.gov/urbanplan/guidebook.pdf.

Contact Dave Todd, dtodd@water.ca.gov, for more information.

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For this funding cycle there is \$21.5 million in grants with 50% cost share. It is to be disbursed to water desalination projects that help generate new or alternate potable water supply and to help advance desalination technologies.

The 49 applications consist of 12 construction project proposals, 17 pilot program proposals, 13 research and development project proposals, and 7 feasibility study proposals. They amount to about \$57.5 million while the total cost of the 49 applications is \$543.5 million. The appli-

cations are evaluated by an independent review panel of members representing local, state, and federal agencies, as well as other stakeholders and experts in technology, environment and economy. After the review, funding recommendations are expected to be made in June 2006. In the previous 2004-05 grant cycle DWR awarded \$24.75 million to 24 projects including three construction projects, six pilot programs and demonstrations, seven research and development projects, and eight feasibility studies.

Information about the 2005 awarded projects, the 2006 applications received, and other information are posted at www.owue.water.ca.gov/recycle/DesalPSP/DesalPSP.cfm.

Advances in desalination technologies such as reverse osmosis are helping to generate new potable water to California

For answers to your questions, contact Fawzi Karajeh of DWR's Water Recycling and Desalination Branch at (916) 651-9669 or fkarajeh@water.ca.gov.

Santa Clara Water District's Recycling Saving Water, Energy and Cleaning Air

By Jeannine Larabee and Hossein Ashktorab, Santa Clara Valley Water District

Water conservation and recycling in the Santa Clara Valley Water District are posting impressive numbers as it saves water, energy and helps to clean the air. And newspapers throughout the San Francisco Bay Area have recognized the district's conservation successes.

The district is a water wholesaler for Santa Clara County, which includes San Jose and 14 other cities. It serves 1.7 million residents, and more than 200,000 commuters. The Water Use Efficiency Unit of the district manages programs in water conservation, water recycling, and desalination.

While the primary goal of water use efficiency programs is to use water more efficiently, other benefits include energy savings and less emission of greenhouse gases and reactive organic gases. That is, generating energy creates particulate emissions, so if we can cut energy use we cut emissions.

"It is remarkable how much energy you can save by saving water through water conservation and water recycling," said Hossein Ashktorab, the manager of the district's Water Use Efficiency unit.

Water conservation programs lead to that energy savings and reduce air emissions two ways.

First, by reducing end-use demand for hot water we cut the energy needed to heat it. Second, by reducing water flows through conveyance, distribution, water treatment or wastewater treatment, we reduce the energy needed to push it through the system.

The district quantified the energy savings and air emissions reductions triggered by the district's water conservation and



'It is remarkable how much energy you can save by saving water through water conservation and water recycling'

– Hossein Ashktorab, Manager, Water Use Efficiency, Santa Clara Valley Water District

water recycling programs. It used two approaches.

First, to determine the energy savings from reducing end-use demand for hot water, we obtained energy savings numbers from published literature as well as rebate data from the district's five water conservation programs for devices that reduce end-use demand for hot water, including low-flow showerheads, faucet aerators, residential high-efficiency clothes washers, CII high-efficiency clothes washers and pre-rinse sprayers.

The district estimated energy savings from these five programs to be more than 20 million kWh for fiscal year 2004-05. And it estimated lifetime cumulative energy savings for rebates awarded (or distributions provided) from these five programs, from fiscal year 1992 -93 through fiscal year 2004-05, to be more than 700 million kWh.

Second, to determine the energy savings and air emissions reductions by reducing water flows, the district used the Water to Air model developed by the Pacific Institute of Oakland. It combined the model's default energy factors (kWh/acre-feet), default end-use assumptions, and default energy source – the California grid -- with district-specific water supply data to estimate energy savings and air emissions reductions. The district estimated energy savings from the district's water conservation and water recycling programs to be more than 196 million kWh for fiscal year 2004-05 and more than 1.3 billion kWh since the programs began in 1992.

To put the savings in perspective, 1.3 billion kWh is equivalent to the electricity required for 200,000 households for a year. For fiscal year 2004-05, the emission of more than 89 million kg of carbon dioxide was avoided because of the district's water conservation and water recycling programs. And for fiscal years 1992-2005, the emission of more than 1.2 billion kg of carbon dioxide was avoided due to the district's water conservation and water recycling programs. The air emissions reductions of other gases as well as particulates are similarly significant.

The district is committed to saving energy. It has signed the 2005 Flex Your Power (FYP) Energy Pledge, having received

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AWMC Creates Water Planning Database

By Kathryn Charlton, Agricultural Water Management Council

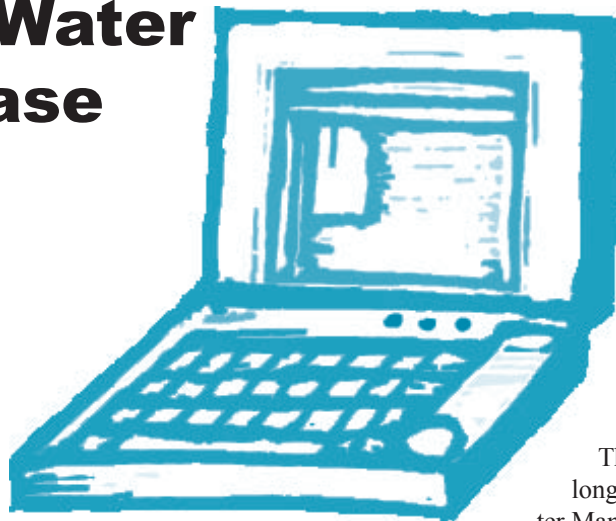
Effective data management is critical if it is to be a useful planning or research tool. The Agricultural Water Management Council has created the first efficient water management practices database to track district activities for all water management plans.

The purpose of the council's Water Management Plan digital database is to make it easier to retrieve historical data from the Water Management Plans, which now are available only on paper. Cataloging these reports into searchable, indexed digital media improves the usefulness of both historic and modern data, while presenting the data with both scope, and historic frame of reference.

Seventy eight water districts representing about 5 million irrigated retail acres are enrolled in the council. Member participation strengthens the consensus-based actions of the council to promote effective agricultural water management practices, as well as assist water suppliers demon-

strate how they use water efficiently. All council members have a water management plan that describes the district, its operations, and what the district does to support water conservation.

The new database will help the council as it works with agricultural water suppliers to advance water management efficiency. Council membership has increased dramatically during the past year with more than 450,000 additional acres enrolled. Since receiving its initial funding through a three-way cooperative agreement between the Council, DWR and the Bureau of Reclamation in 2001, membership has



increased by more than 50 percent. Even though membership has grown at a rapid rate, council directors remain committed to recruiting members. The council strives to represent all of California's irrigated acreage.

There are immediate and long-term benefits of the Water Management Plan database.

It has reliable data that planners can use to evaluate the state's water use and supply. In addition, the council will seek to document activities and the resulting improvements in member districts' water management. The database also allows the tracking of both Water Management Plan reports and Efficient Water Management Practice implementation. The database also will help to identify opportunities for improved implementation.

Regarding the database, contact the council office to receive a copy of the 2005 AWMC Annual Report. For more information contact the AWMC at 916-441-7868 or visit www.agwatercouncil.org.

New Urban and Ag Water Use Efficiency Grant Funds

By Baryohay Davidoff

A new cycle of Proposition 50 Grant Funding for the Water Use Efficiency projects will provide funding for agricultural and urban projects in 2006-2007. The proposed state budget includes Proposition 50 grant funds.

There is about \$35 million in the 2006/2007 budget for urban and agricultural water use efficiency grants, which will be competitively awarded.

The Office of Water Use Efficiency and Transfers (OWUET), with input from its stakeholders, will request, review and

select proposals through its Proposal Solicitation Package (PSP). Detailed requirements, eligibilities, type of projects, and other information are included in the PSP. Visit the Department of Water Resources Web site at www.water.ca.gov for updated information or contact Baryohay Davidoff at (916) 651-9666 or by e-mail at baryohay@water.ca.gov.

CIMIS

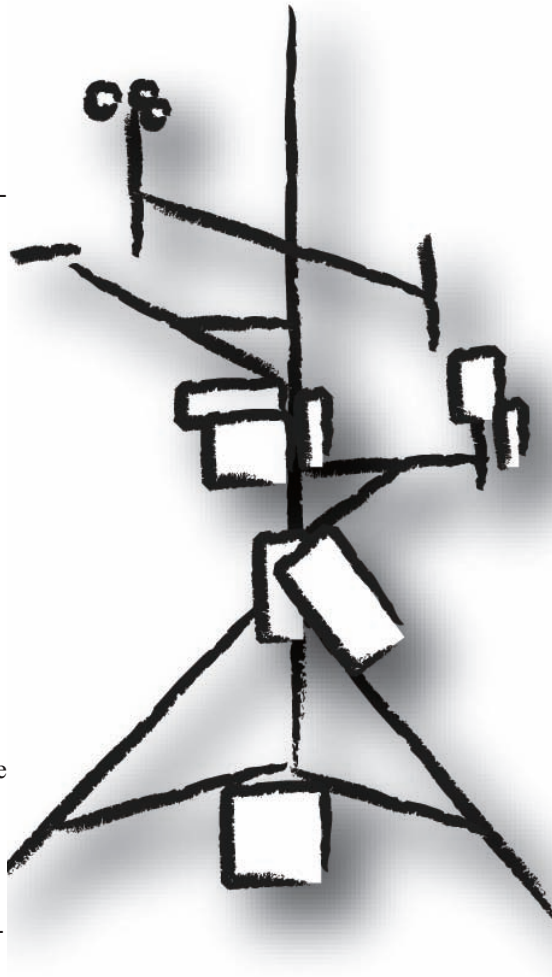
Status Update on Non-Ideal Site Investigations

By Kent Fame

Criteria for establishing a California Irrigation Management Information System (CIMIS) weather station are very specific. The scientifically accepted standard equations used for estimating reference evapotranspiration (ET_o) require that the weather station be put over a cool season grass. Because of this requirement, many regions of the state have difficulty meeting this criteria, especially in urban areas, hence the non-ideal site study.

The non-ideal site investigation is looking at the possibility of locating weather stations over surfaces other than grass and determining if a correlation can be developed to a reference station that would then allow a non-ideal site to be used for estimating ET_o. The investigation is expanding upon a 2001 study by Rick Snyder and others at University of California, Davis. Snyder's study found it feasible to develop correlations between reference and non-ideal sites.

The California Urban Water Conservation Council (CUWCC) and the Department of Water Resources' (DWR)



Office of Water Use Efficiency and Transfers (OWUET) joined to aid the CIMIS non-ideal site investigation. The public is invited to participate in the investigation. Meetings are held during CUWCC Landscape Subcommittee meetings.

DWR will operate 10-12 weather stations per year during the investigation, which will be extended many years and each year include new participants. In 2006, the first year of the investigation, 10 water agencies have been identified that have weather station equipment and sites available for installation of weather stations. CIMIS personnel are visiting these sites and determining if they are suitable. If they are, we will install a station. The CUWCC has hired a technical analyst who will assist DWR in the investigation. This position will act as the liaison between the project participants and DWR and analyze data.

For more information visit www.cuwcc.org/committee_sub_landscape.lasso or contact Kent Fame at kframe@water.ca.gov or telephone 916-651-7030.

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its Green Business Certification in 2004, and having committed to energy-efficient practices and procedures.

The district's Water Use Efficiency unit was one of eight recipients out of 600 applicants to receive a 2005 Flex Your Power Congratulatory Ad and one of 44

recipients out of 246 total applicants to receive a 2005 Flex Your Power Award Honorable Mention. The 2005 Flex Your Power Congratulatory Ads ran in regional newspapers, including the San Francisco Chronicle, the San Jose Mercury News, and the Oakland Tribune, every Sunday for five weeks in the fall of 2004.

As a recipient of a 2005 Flex Your Power Award Honorable Mention, the district received a certificate of recognition at an awards ceremony. These awards help the district tell the Bay Area about the district's notable achievements in both water use energy efficiency.

Recycling Unused Drugs Helps Water Recycling

By Fawzi Karajeh

Emerging contaminants, xenobiotics, endocrine disruptors, endocrine active chemicals, pharmaceuticals and personal care products, hormonally active agents, persistent organic pollutants, bioaccumulative chemicals of concern ... and more.

These are some of the plethora of chemicals, pollutants and toxins we hear and read about more frequently making their way into our streams, lakes and groundwater. Even though these pollutants have gained our attention only recently, they likely have been in our water supplies for many years. Most of these contaminants come from:

- Personal care products such as fragrances, deodorants, disinfectants, cosmetics, sun screens, and insect repellants
- Pharmaceutical products such as prescription and over-the-counter drugs, antibiotics, and diagnostic agents
- Detergents and other cleaning agents
- Household chemicals
- Agricultural fertilizers, pesticides, fungicides and animal growth hormones

The continuous widespread use and discharge of these products exacerbates their persistence in our water.

Emerging contaminants is important not only to the wastewater or water recycling community but also to the water supply, environmental ecology, and public health communities.

There are several studies of the pathways these contaminants use to enter the water supply and ways to remove them. While we can't prevent all contaminants from getting into our water, particularly recycled



water, we can reduce it significantly by recycling the unused portions of the source products. One way is nonpoint source control of household waste, illegal dumping, improper disposal of unused prescription and over-the-counter drugs.

In an article published by the Sacramento Bee on December 27, 2005, titled "Waste not, want not" by Clea Benson, it was reported that about \$1 billion of unused prescriptions are thrown away each year in United States. And in the Stanford Report, a Stanford University publication, it was estimated \$100 million in unused prescriptions were thrown away each year in California.

Disposing unused prescription and over-the counter drugs involves multiple waste issues. First, it's wasting a lot of money. Second, it's posing health risks. Third, we may have to abandon some of our water sources if these contaminants reach unhealthy concentrations. And fourth, it will

cost millions of dollars to remove them – if it's even possible.

Complementing the research to eliminate or minimize the effects of emerging contaminants on our water, institutional and outreach also are needed. I was impressed when I read about a medical students at Stanford University. They prompted legislation (Senate Bill 798) introduced by Sen. Joe Simitian in February 2005 and signed by Governor Arnold Schwarzenegger on September 30, 2005. The bill authorizes counties to collect unused drugs from nursing homes, wholesalers and manufacturers, and redistribute them to the low-income uninsured. Recycling unused drugs to those who are in need but cannot afford them while keeping our water systems including water recycling facilities free of these contaminants makes a lot of sense. Such initiative will help communities expand their use of recycled water and evade costly water treatment measures.

California Urban Water Conservation Council

By Mary Ann Dickinson, Executive Director

BMP reports due

It's that time again....time to file your Best Management Practice (BMP) Reports on the council's Web site. Our web-based reporting system is an easy way to record your agency's BMP implementation information without having to write a long report. This public Web site is monitored by a variety of state agencies, including the State Water Resources Control Board, so be sure that you enter all your conservation program information to enable your water agency to get full credit for BMP implementation and savings.

The BMP report forms have been completely revised for FY 2005-2006 to incorporate many of the changes that you have requested. We will be offering a series of BMP Reporting training sessions this summer across the state to discuss the changes and to generally train users on how to file the BMP Reports. The workshops will be free to council members and U.S. Bureau of Reclamation contractors and \$50 for non-members. Check the council's calendar page at www.cuwcc.org for details on registering for a workshop near you. We can even schedule a workshop in your service area if you have a computer lab. For information, call Beth Ernsberger at 916-552-5885, extension 14 or e-mail her at beth@cuwcc.org.

Cost-effectiveness training workshops set

You probably already know that your water agency doesn't have to implement a BMP if that BMP is not cost-effective, but how do you figure that out? Or how do you figure out if a special way of implementing a BMP program will remain cost-effective for your agency? We will make it easier for you. Special training workshops on how to calculate BMP cost-effectiveness will be held October 4 in Northern California and October 11 in Southern California. The workshops

will run from 9:30 a.m. to 3 p.m. and will include step-by-step instruction on what cost-effectiveness analysis is and how to use some simple Excel spreadsheets. The workshops by David Mitchell are free for council members and \$150 for non-members.) Details on the locations of the workshops will be posted on the council's calendar page at www.cuwcc.org.

Council launches one-stop rebate program

Thanks to a Proposition 50 grant from the Department of Water Resources, the council will be managing a consolidated multiple-rebate program for water agencies throughout California. Many devices and products can qualify for rebates. The council will administer the program, conduct all of the marketing in conjunction with your water agency, process the rebates, and help verify that the devices have been installed correctly. Costs will be charged back to the water agency on a per-rebate basis. The more rebates that are requested by water agencies in the program, the lower the unit rebate cost will be for all.

If you are a council member, this program is available to you. It is not too late to sign up. If you are not a council member, this is a good time to consider joining. Special Prop 50 funding preference will be given to water agencies that do not have rebate programs, but the rebate program overall will be available to all agencies. Contact Katie Shulte Joung at 916-552-5885, extension 15 for more information, or e-mail her at katie@cuwcc.org.

Revised plumbing handbook available

We are very pleased to announce that for the first time we have updated our very popular Practical Plumbing Handbook, our consumer guide for how to maintain efficient plumbing fixtures and appli-

ances. This 47-page colorful booklet is jam-packed with helpful information on conserving water and fixing common leaks and other plumbing problems in the home. We listened to your suggestions and the handbook now includes:

- Top Ten Ways to Save Water
- Tips on landscape irrigation efficiency
- Improved sections on fixing leaky faucets and toilets
- Consumer information on ultra low-flush toilets and high efficiency toilets
- Instructions on toilet replacement
- Conservation practices for pools and spas
- Council members can order the booklets at the discounted price of \$1.50 each. The non-member price is \$2.50 each. Bulk orders will include shipping and handling. Order by e-mailing heather@cuwcc.org.

Alliance for water efficiency in Chicago

The new national water efficiency organization, the Alliance for Water Efficiency, has been incorporated as a 501(c)(3) non-profit in the state of Illinois. The permanent home for the Alliance will be Chicago, but will be located within the California Urban Water Conservation Council during its first year. Following a final workshop held in Washington, D.C. on June 6, the Alliance began appointing its Board of Directors and starting its work. Projects to be undertaken in the first year will be the creation of a water conservation program clearinghouse and the continued work on national codes and standards for efficient products and appliances. A national Web site will be at www.allianceforwaterefficiency.org. Watch for new developments on the council's Web site at www.cuwcc.org/national_cwe.lasso.

Demonstration Gardens Grow with Prop. 50 Grants

By Julie Saare-Edmonds

Unlike previous state water use efficiency grant programs, demonstration and education projects were eligible for funding by Proposition 50 grants. Three new demonstration gardens received funding from this round and will begin construction soon. The new gardens will be in Alameda, Santa Clara and Clovis. After completion they will be open for visitors and will host workshops for the public to come and learn about resource efficient gardening.

Demonstration gardens serve to educate visitors on many aspects of resource efficient gardening such as conserving water, reusing green waste as compost and mulch and the energy conservation associated with saving water. Through interpretive signs, brochures, trained docents and organized workshops, visitors can learn about proper plant selection to help them choose plants best suited for their particular climate, sun exposure and size limits. Correct planting techniques will be demonstrated to ensure healthy,

successful plants. Irrigation installation techniques, equipment, and irrigation scheduling are some of the kinds of information demonstration gardens offer. The value of compost and mulch to achieve a healthy landscape will also be emphasized.

Demonstration gardens offer an opportunity to see what a resource efficient landscape looks like. Visitors are often quite surprised to see that the gardens are attractive lush green places with vibrant flowers and butterflies and hummingbirds busily working away. These gardens can prove to skeptics that saving water and energy and reusing green waste does not mean sacrificing beauty or function.

The Clovis garden will be an expansion of the existing Clovis Botanical Garden and is operated by the Clovis Botanical Garden Committee. The Alameda garden will be called the Ploughshares Garden located on Main Street in Alameda. It will be operated by the Alameda Point Collaborative. The Santa Clara garden will be part of the



Guadalupe River Park and operated by the Santa Clara Valley Water District.

These new gardens will not be open for visitors for several months, in the meantime visit the Bureau of Reclamation Web site for the locations of existing demonstration gardens in your area: www.usbr.gov/mp/watershare/resources/gardens/index1.html

Panoche Ag Water Grant for Herndon Avenue Lateral

By Phil Anderson

The Panoche Water District is located in Western Fresno County and began receiving its first Central Valley project (CVP) water supply in 1947. Since formation and construction of the first water conveyance, the district has continued to improve its ability to provide irrigation water service diverting water from the Delta-Mendota and the San Luis canals.

In 2002, the district applied to the Department of Water Resources in 2002, for the Proposition 13 Feasibility Study Grant. DWR awarded the district a \$54,545 grant for a feasibility study of their Herndon Avenue Lateral project.¹

The objective of this project was to reduce the seepage losses from the existing earthen canal, which will be replaced by

concrete-lined Herndon Avenue Lateral and to increase irrigation efficiency that results from stabilization of water surface elevations in the irrigation water distribution system and the ability to better match water supply to water demand.

This feasibility study concluded that since there is a great deal of fluctuation in the

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Legislature Mulls Water-Saving Landscaping Recommendations

Water Conservation in Landscaping Act, AB 1881, Laird Update

By Kent Frame

The legislative charge of Assembly Bill 2717, authored by Assemblyman John Laird and signed by Governor Arnold Schwarzenegger in 2004, requested the California Urban Water Conservation Council to convene a stakeholder task force, composed of public and private agencies, to evaluate and recommend proposals by December 31, 2005, for improving the efficiency of water use in new and existing urban irrigated landscapes in California.

Based on this charge, the Task Force adopted a comprehensive set of 43 recommendations.

The Landscape Task Force estimates that by implementing these recommendations California can achieve annual water savings of 600,000 to 1,000,000 acre-feet,

enough water to meet the needs of up to two million households.

The AB 2717 Taskforce submitted their recommendations to the Governor and the Legislature and the recommendations are now introduced to the Legislature as AB 1881, Laird.

This bill would require DWR, not later than January 1, 2009, to update the model local water efficient landscape ordinance reflecting the provisions of AB 2717. DWR would be required to form a stakeholder work group to assist updating the landscape model ordinance. The bill would then require DWR, not later than January 31, 2011, to prepare and submit a report to the Legislature relating the status of water efficient landscape ordinances adopted by local agencies.

Mark Your Calendar

Managing drought and water scarcity in vulnerable environments

The Geological Society of America (GSA) is sponsoring a conference on “Managing Drought and Water Scarcity in Vulnerable Environments; Creating a Roadmap for Change in the United States.”

The conference, co-sponsored by the National Weather Research Institute, will focus on evaluating drought-related problems and anticipate future issues, including identifying successful strategies for managing drought and water scarcity. The conference will be held September 18 to 20, 2006, in Longmont, Colorado.

Topics will include: interactions among humans and the environment; improved monitoring and prediction of drought; economic aspects of drought; and effects of global climate change. For more information, including registration, visit GSA’s Web site at www.geosociety.org/meetings/06drought/.

6th international symposium on managed aquifer recharge

Abstracts are being accepted for the “Sixth International Symposium on Managed Aquifer Recharge” (ISMAR6). The conference, devoted entirely to aquifer recharge, is being organized by the Arizona Hydrological Society, National Weather Research Institute, International Association of Hydrogeologists, Environmental and Water Resources Institute, and the United Nations Educational, Scientific and Cultural Organization. ISMAR6 will be held October 28 to November 2, 2007, in Phoenix, Arizona.

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Address Correction Requested

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water levels in an open channel delivery system; the construction of the lateral would provide needed distribution system capacity with very stable water levels and flexible delivery times. The estimated water savings for the project is 0.47 acre-feet per acre per year: a total potential annual cost savings in reduction of applied water of \$2.5 M per year.²

Construction of the Herndon Avenue Lateral will present water users with an opportunity to optimize irrigation efficien-

cy and minimize deep percolation through better water management and installation of subsurface drip systems, which may offer the best opportunity to meet the project goals.

The Final Report was prepared by Dennis Falaschi, General Manager (PWD) and Marcos Hedrick, Water Master (PWD). The summary of final report was written by Phil Anderson, DWR. For more information contact Phil Anderson at 916-651-9663.

¹The total cost of the project feasibility study was estimated to be \$67,051. The State of California's share of the cost was estimated at \$54,545. The final overall project cost was \$60,722. The project came in \$6,328 under budget, with the final State cost being \$48,216.

²The District estimated the average avoided cost of water is \$140 per acre-foot. The District must work on managing the subsurface drainage stream, which is estimated to cost \$300 per acre-foot. It is assumed that 75% of the deep percolation enters the subsurface drainage stream. The combined cost savings resulting from reduction of applied water is therefore estimated \$365 per acre-foot. At an average water savings of 0.47 acre-feet per acre per year, the cost is \$172 per acre per year. The annual water savings occurs on a total of 14,500 acres and is estimated to be 6,815 acre-feet per year.

